

Abstract

It is disclosed that a novel polypeptide useful for screening for an agent for specific diseases to which gastrointestinal hormones are related, particularly irritable bowel syndrome, a polynucleotide encoding the polypeptide, a vector comprising the polynucleotide, and a transfected cell by the vector. It is disclosed that the polypeptide is a novel type II transmembrane serine protease related to the regulation of hormones produced in gastrointestinal tract or a precursor thereof. Additionally, a screening method of an agent for gastrointestinal diseases using the polypeptide and a method for producing a pharmaceutical composition for the treatment of gastrointestinal diseases, comprising a substance obtained by the screening method as the active ingredient are disclosed.